REMARKS

This application has been reviewed in light of the Office Action mailed on April 22. 2004. Claims 1-7 are pending in the application with Claim 1 being in independent form. By the present Amendment, Claims 1-7 have been amended. and Claims 8-11 have been added. Claims 1-7 have been amended to place them in better form, such as changing "characterized by" to --wherein— and adding proper antecedent basis. No new matter or issues are believed to be introduced by the amendments.

About the Invention

The present invention relates generally to apparatuses and methods for providing copy protection services on a storage medium, for example, a solid state memory module. The data on the storage medium is arranged in sectors, each sector having a field (S4T) associated therewith, named the "Secure Solid State Sector Tag". The field (S4T) stores a random number Ri which is randomly changed (renewed) on each write operation to that sector by some preferably dedicated logic (e.g., on-chip logic), and cannot be modified. Data is encrypted on the storage medium using a key which depends critically on the random numbers Ri's. In this manner, bit-by-bit copies and recopies from an intermediate storage medium cannot by decrypted because the values of the random numbers will have changed, thus preventing unauthorized duplication and replay attacks. Further, the random numbers cannot be modified deterministically by devices employing the module.

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(1)   In the Office Action, the Specification was objected to for failing to include section headings. Applicants respectfully declines to add the headings as they are not required in accordance with MPEP §608.01(a) and requests withdrawal of the objection to the specification.

(2)   In the Office Action, Claim 1 was objected to because of certain informalities. In response, Claim 1 has been amended to correct the informalities noted by the Examiner. Accordingly, withdrawal of the objection to the claim is respectfully requested.

(3)   In the Office Action, Claims 1-7 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,917,908 issued to Takenaka on June 29, 1999.

For at least the reasons set forth below, Applicants respectfully traverse the rejections of Claims 1-7 and request that these rejections be withdrawn.

Applicants respectfully submit that the claimed invention, is neither anticipated by, nor obvious in view of Takanaka et al.

The Examiner appears to have taken various words and phrases from throughout the disclosure of Takanaka et al, and then assert the correspondence of these words and phrases to the elements of Applicant's claimed invention. As set forth in greater detail below, Applicants' submit that the Examiner's interpretation of the cited portions of Takanaka is incorrect.

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With respect to independent claim 1, the Examiner alleges that Takenaka teaches a method of providing copy-protection services on a data storage medium characterized in that the stored data is arranged in sectors (Takenaka allegedly teaches *data arranged in blocks*), a tagging part (Takenaka allegedly teaches *a data management portion*), where the tagging part of said sector comprises a field that stores a value Ri (Takenaka allegedly teaches *positional information*) which is randomly altered with each write access to said sector, and the stored data being encrypted with an encryption key that is at least part derived from values of at least some of said fields.

(a) First, Applicants respectfully assert that Takanaka does not teach or disclose "the stored data is arranged in sectors (**data arranged in blocks**), as alleged by the Examiner at Fig. 7 and column 5, lines 45-53.

Takenaka discloses at Col. 5, lines 45-53:

A logical structure of the storage unit 20 is formed as shown in FIG. 7. That is, the storage unit 20 is divided into <u>a data portion, a file-name management portion and a data management portion.</u> The data portion is provided with data of files, the data management portion is used to manage positions at which files are stored in the data portion and the file-name management portion is used to manage relationships between names of files and the data management portion. [Emphasis Added]

Takenaka teaches that data portion stores positional-information k identifying an area in which the data (machine specific information) should be stored. The data management portion is used to manage positions at which files are stored in the data portion. The file-name management portion stores information used to manage a relationship between a name of the file and a position at which the information is stored in the data management portion.

The Examiner appears to have misinterpreted the grid-like appearance of Fig. 7 for teaching data arranged in sectors (blocks). What Takenaka in fact discloses at Col. 5,

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lines 45-53 and shows at Fig. 7 is the logical structure of the storage unit into the

respective data portion, data management portion and file-name management portion and

no more. That is, the granularity shown and described is not at the file level but only at

the storage unit level (i.e., where files are stored in memory). Takanaka is silent with

respect to the organization of the file. There is no teaching or disclosure of the data being

arranged in sectors, as recited in Claim 1.

(b) Second, Applicants respectfully assert that Takanaka et al. does teach or

disclose "a tagging part" (*a data management portion*), as alleged by the Examiner at

Fig. 7. Claim 1 recites that the tagging part is associated with each sector, i.e., "a tagging

part being associated with each sector". Claim 1 further recites that the tagging part, in

each sector, stores a random value Ri which is randomly changed with each write access

to the sector.

The data management portion of Takanaka et al. refers to a portion of memory

used to manage positions at which files are stored in the data portion.

Takanaka teaches at Col. 6, lines 47-50:

> When the file of the machine specific information is opened (S211), positional-
> information items i', j' and k' for areas in which information regarding the file
> is stored in the data management portion. [Emphasis Added]

While one or more positional information items i', j', and k' are generated as a

random number, Applicants respectfully assert that items items i', j', and k' are not

random numbers associated with each sector and changed with each write access, as

recited in Claim 1.

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(c) Third, Applicants respectfully assert that Takanaka et al. does not at Col. 5, lines 61-65 that *the tagging part of said sector comprises a field that stores a value Ri* is equivalent to (*positional information*). As previously stated, in accordance with the invention, a separate random value Ri is stored for <u>each</u> sector, as recited in Claim 1. Secondly, the random value Ri computed for each sector is randomly changed with each write access.

In contrast, Takanaka et al. generates a single random number, referred to as "machine specific information", (**positional-information item k**), used to determine an address at which a file is stored in the storage unit. The single random number is not sector specific, nor is it changed with each write access, as recited in Claim 1.

Accordingly, applicant respectfully request withdrawal of the rejection under 35 U.S.C. §103(a) with respect to Claim 1 and allowance thereof is respectfully requested.

Claims 2-7 depend from independent Claim 1 and therefore contain the limitations of Claim 1. Hence, for at least the same reasons given for Claim 1, Claims 2-7 are believed to be allowable over Takanaka. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) with respect to Claims 2 and 4-10 is respectfully requested.

Dependent claims 8-11 have been added to better define Applicants' invention and to overcome the rejection.

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-11 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels

that an interview would be helpful, the Examiner is requested to call Dicron Halajian,

Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-333-9607

Respectfully submitted,
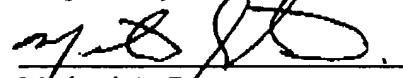
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